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Sheet	1	of	5	Application Number	10/824,678
				Filing Date	April 15, 2004
				First Named Inventor	RUECKES et al.
				Art Unit	2812
				Examiner Name	TBA
				Attorney Docket Number	112010.152US2 NAN-28

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
DM		US 2002/0130311 A1	09-19-2002	LIEBER et al.	
DM		US 2002/0130353 A1	09-19-2002	LIEBER et al.	
DM		US 2002/0172963 A1	11-21-2002	KELLEY et al.	
DM		US 2002/0179434 A1	12-05-2002	DAI et al.	
DM		US-2003/0021966 A1	01-30-2003	SEGAL et al.	
DM		US-2003/0124325 A1	07-30-2003	RUECKES et al.	
DM		US-2003/0165074 A1	09-04-2003	SEGAL et al.	
DM		US-2003/0234407 A1	12-25-2003	VOGELI et al.	
DM		US-2003/0236000 A1	12-25-2003	VOGELI et al.	
DM		US-2004/0085805 A1	05-06-2004	SEGAL et al.	
DM		US-2004/0159833 A1	08-19-2003	RUECKES et al.	
DM		US-2004/0164289 A1	08-26-2003	RUECKES et al.	
DM		US-2004/0175856 A1	09-09-2004	JAIPRAKASH et al.	
DM		US-2004/0181630 A1	09-16-2004	JAIPRAKASH et al.	
DM		US-2004/0191978 A1	09-30-2004	RUECKES et al.	
DM		US-2004/0214366 A1	10-28-2004	SEGAL et al.	
DM		US-2004/0214367 A1	10-28-2004	SEGAL et al.	
DM		US-2005/0047277 A1	03-03-2005	RUECKES et al.	
DM		US-2005/0041465 A1	02-24-2005	RUECKES et al.	
DM		US-2005/0041566 A1	02-24-2005	RUECKES et al.	
DM		US-2005/0056877 A1	03-17-2005	RUECKES, et al.	
DM		US-3,448,302	06-03-1969	SHANEFIELD	
DM		US-4,845,533	07-04-1998	PRYOR et al.	
DM		US-4,853,893	08-01-1989	EATON et al.	
DM		US-4,876,667	10-24-1989	ROSS, et al.	
DM		US-4,888,630	12-19-1989	PATERSON	

Examiner Signature		Date Considered	8/14/05
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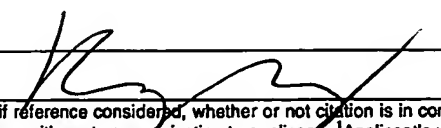
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			Application Number	10/824,678	
			Filing Date	April 15, 2004	
			First Named Inventor	RUECKES et al.	
			Art Unit	2812	
			Examiner Name	TBA	
			Attorney Docket Number	112010.152US2 NAN-28	
Sheet	2	of	5		

DM		US-5,198,994	03-30-1993	NATORI	
DM		US-6,044,008	03-28-2000	CHOI	
DM		US-6,048,740	04-11-2000	HSU et al.	
DM		US-6,128,214	10-03-2000	KUEKES et al.	
DM		US-6,159,620	12-12-2000	HEATH et al.	
DM		US-6,183,714	02-06-2000	SMALLEY et al.	
DM		US-6,198,655	03-06-2001	HEATH et al.	
DM		US-6,221,330 B1	04-24-2001	MOY et al.	
DM		US-6,232,706	05-15-2001	DAI et al.	
DM		US-6,445,006	09-03-2002	BRANDES et al.	
DM		US-6,518,156 B1	02-11-2003	CHEN	
DM		US-6,548,841	04-15-2003	FRAZIER et al.	
DM		US-6,559,468 B1	05-06-2003	KUEKES et al.	
DM		US-6,574,130	09-04-2003	SEGAL et al.	
DM		US-6,643,165	11-04-2003	SEGAL et al.	
DM		US-6,673,424 B1	01-06-2004	LINDSAY	
DM		US-6,706,402	03-16-2004	RUECKES et al.	
DM		US-6,750,471B2	06-15-2004	BETHUNE et al.	
DM		US-6,759,693	07-06-2004	VOGELI et al.	
DM		US-6,774,052	08-10-2004	VOGELI et al.	
DM		US-6,781,166 B1	08-24-2004	LIEBER et al.	
DM		US-6,784,028	08-31-2004	RUECKES et al.	
DM		US-6,803,840	10-12-2004	HUNT et al.	
DM		US-6,809,465	10-26-2004	JIN	
DM		US-6,835,591	12-28-2004	RUECKES et al.	

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FOREIGN PATENT DOCUMENTS					
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		Number-Kind Code <sup>2</sup> (if known)			
DM		WO 01/44796 A1	06-21-2001	Board of Trustees of the Leland Stanford Junior University	
DM		WO 01/03208	01-11-2001	President and Fellows of Harvard College	
DM		WO 2003/091486	11-06-2003	Nantero, Inc.	
DM		WO 2004/065655	08-05-2004	Nantero, Inc.	
DM		WO 2004/065657	08-05-2004	Nantero, Inc.	
DM		WO 2004/065671	08-05-2004	Nantero, Inc.	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, volume-issue number(s), page(s), publisher, city and/or country where published.	T <sup>2</sup>
DM	A1	AJAYAN, P.M., et al., "Nanometre-size tubes of carbon," Rep. Prog. Phys., 1997, Vol. 60, pp. 1025-1062.	
DM	A2	AMI, S. et al., "Logic gates and memory cells based on single C <sub>60</sub> electromechanical transistors," Nanotechnology, 2001, Vol. 12, pp. 44-52.	
DM	A3	AVOURIS, Ph., "Carbon nanotube electronics," Carbon, 2002, Vol. 14, pp. 1891-1896.	
DM	A4	CASAVANT, M.J. et al., "Neat macroscopic membranes of aligned carbon nanotubes," Journal of Appl. Phys., 2003, Vol. 93(4), pp. 2153-2156.	
DM	A5	CHOI, W.-B. et al., "Carbon-nanotube-based nonvolatile memory with oxide-nitride-film and nanoscale channel," Appl. Phys. Lett., 2003, Vol. 82(2), pp. 275-277.	
DM	A6	CUI, J.B. et al., "Carbon Nanotube Memory Devices of High Charge Storage Stability," Appl. Phys. Lett., 2002, Vol. 81(17), pp. 3260-3262.	
DM	A7	DAI, H. et al., "Controlled Chemical Routes to nanotube Architectures, Physics, and Devices," J. Phys. Chem. B, 199, Vol. 103, pp. 111246-11255.	

Examiner Signature	Date Considered
	8/14/05

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			Art Unit	2812	
			Examiner Name	TBA	
Sheet	4	of	5	Attorney Docket Number	112010.152US2 NAN-28

DM	A8	DEHON, A., "Array-Based Architecture for FET-Based, Nanoscale Electronics," IEEE Transactions on Nanotechnology, 2003, Vol. 2(1), pp. 23-32.	
DM	A9	DEQUESNES, M. et al., "Calculation of pull-in voltages for carbon-nanotube-based nanoelectromechanical switches," Nanotechnology, 2002, Vol. 13, pp. 120-131.	
DM	A10	DEQUESNES, M. et al., "Simulation of carbon nanotube-based nanoelectromechanical switches," Computational Nanoscience and Nanotechnology, 2002, pp. 383-386.	
DM	A11	FAN, S. et al., "Carbon nanotube arrays on silicon substrates and their possible application," Physica E, 2000, Vol. 8, pp. 179-183.	
DM	A12	FARAJIAN, A. A. et al., "Electronic transport through bent carbon nanotubes: Nanoelectromechanical sensors and switches," Phys. Rev. B, 2003, Vol. 67, pp. 205423-1 = 205423-6.	
DM	A13	FISCHER, J.E. et al., "Magnetically aligned single wall carbon nanotube films: Preferred orientation and anisotropic transport properties," Journal of Appl. Phys., 2003, Vol. 93(4), pp. 2157-2163.	
DM	A14	FRANKLIN, N. R. et al., "Integration of suspended carbon nanotube arrays into electronic devices and electromechanical systems," Appl. Phys. Lett., 2002, Vol. 81 (5), pp. 913-915.	
DM	A15	FUHRER, M.S. et al., "High-Mobility Nanotube Transistor Memory," Nano Letters, 2002, Vol. 2(7), pp. 755-759.	
DM	A16	HOMMA, Y. et al., "Growth of Suspended Carbon Nanotubes Networks on 100-nm-scale Silicon Pillars," Appl. Phys. Lett., 2002, Vol. 81(12), pp. 2261-2263.	
DM	A17	KINARET, J.M. et al., "A carbon-nanotube-based nanorelay," Appl. Phys. Lett., 2003, Vol. 82(8), pp. 1287-1289.	
DM	A18	LEE, K.-H. et al., "Control of growth orientation for carbon nanotubes," Appl. Phys. Lett., 2003, Vol. 82(3), pp. 448-450.	
DM	A19	RADOSAVLIEVIC, M. et al., "Nonvolatile molecular memory elements based on ambipolar nanotube field effect transistors," Nano Letters, 2002, Vol. 2(7), pp. 761-764.	
DM	A20	ROBINSON, L.A.W., "Self-Aligned Electrodes for Suspended Carbon Nanotube Structures," Microelectronic Engineering, 2003, Vol. 67-68, pp. 615-622.	
DM	A21	RUECKES, T., et al., "Carbon Nanotube-Based Nonvolatile Random Access Memory for Molecular Computing" Science, 2000, Vol. 289, pp. 94-97.	
DM	A22	SOH, H. T. et al., "Integrated nanotube circuits: Controlled growth and ohmic contacting of single-walled carbon nanotubes," Appl. Phys. Lett., 1999, Vol. 75(5), pp. 627-629.	
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DM	A23	SREEKUMAR, T.V., et al., "Single-wall Carbon Nanotube Films", Chem. Mater. 2003, Vol. 15, pp. 175-178.	
DM	A24	TANS, S. et al., "Room-temperature based on a single carbon nanotube," Nature, 1998, Vol. 393, pp. 49-52.	
DM	A25	TOUR, J. M. et al., "NanoCell Electronic Memories," J. Am. Chem. Soc., 2003, Vol. 125, pp. 13279-13283.	
DM	A26	VERISSIMO-ALVES, M. et al., "Electromechanical effects in carbon nanotubes: Ab initio and analytical tight-binding calculations," Phys. Rev. B, 2003, Vol. 67, pp. 161401-1 = 161401-4.	
DM	A27	WOLF, S., Silicon Processing for the VLSI Era; Volume 2 – Process Integration, Multi-Level-Interconnect Technology for VLSI and ULSI, 1990, Section 4.3 Materials for Multilevel Interconnect Technologies, pp. 189-191, Lattice Press, Sunset Beach	
DM	A28	WOLF, S., Silicon Processing for the VLSI Era; Volume 2 – Process Integration, 1990, Section 4.7 Manufacturing Yield and Reliability Issues of VLSI Interconnects, pp. 260-273, Lattice Press, Sunset Beach	
DM	A29	ZHAN, W., et al., "Microelectrochemical Logic Circuits," J. Am. Chem. Soc., 2003, Vol. 125, pp. 9934-9935.	

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